

WHAT IS CLAIMED IS:

Sub. C1
Sub. D2
5 1. A live vaccine for human immunodeficiency virus (HIV) comprising a recombinant plasmid containing a gene required for surface exposure and a gene encoding a human immunodeficiency virus protein.

Sub. D2
10 2. The vaccine of claim 1, wherein said gene required for surface exposure encodes *E. coli*-lipoprotein signal sequence linked to a portion of the *E. coli* outer membrane protein ompA.

Sub. D3
15 3. The vaccine of claim 1, wherein said gene encoding a human immunodeficiency virus protein is selected from the group consisting of reverse transcriptase and transactivating protein.

20 4. The vaccine of claim 1, wherein said recombinant plasmid is electroporated into an attenuated bacterial host.

Sub
C14

5. The vaccine of claim 4, wherein said attenuated bacterial host is a strain of *Salmonella typhimurium*, SL3261.

Sub C2
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6. A method of initiating immune responses specific for human immunodeficiency virus antigens in an individual in need of such treatment comprising the step of administering said individual with the vaccine of claim 1.

Sub C16

7. The method of claim 6, wherein said human immunodeficiency virus antigen is selected from the group consisting of reverse transcriptase and transactivating protein.

8. The method of claim 6, wherein said immune responses comprises a mucosal IgA response and a helper T cell response.

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